HQ CIVIL WORKS ENGINEERING and CONSTRUCTION NOTES

Volume III Number 10 **14 July 1998**

Notes from Steve Stockton, Chief, Engineering and Construction Division

Two and a half years ago I left Portland and arrived at the Pulaski Building. Not knowing what to expect, I intentionally set my expectations low (as folks in the field sometimes do when they reflect on an assignment at Headquarters). Other than 3 years with the Navy in Norfolk, my entire Federal career had been spent in Oregon. To my delight I have found that Headquarters is an incredibly exciting and challenging place to work. Recognize now that this was my first exposure to the "nurturing" leadership style of MG Genega, and I still loved it. The friendly and helpful folks I have had the opportunity to work with, and learn from, are without exception among the finest the world has to offer. They are incredibly talented, technically competent, dedicated and hardworking. I have come to appreciate more fully the depth of talent that the Corps possesses in every District, Division, Lab, and yes, especially Headquarters. I must give special recognition to the folks I have worked most closely with in Civil Works Engineering (and soon to be Construction) Division and my adopted staff in Planning Division. Without their solid support issuing guidance, responding to taskers or solving the problem du jour, my stay here would have been very trying. I believe I have re-learned a very important lesson. People make us the great organization we are today.

This Month's Contents

As I move to the South Pacific Division, I think the thing that I will miss most about my assignment at Headquarters will be the people. I would like to be able to thank all of you individually for the assistance that you have given me during my tenure, however, that is impossible for I would surely miss someone. Therefore please accept this message as my heartfelt "Thank You" for your hard work. That said, I still need to thank Harry Kitch and Charles Pearre, editors in chief for "Planning Ahead" and "CW

Engineering Notes". Without their perseverance and continual reminders there would have been far fewer of these newsletters. I hope you have found them worthwhile and hope that they have brought us a little bit closer together throughout the Corps.

The challenge that I see in the near future is our ability to change from a "stovepipe" organization, with a district focus, to a "corporate team". To do this we must make all boundaries within our organization transparent to our customers and deliver the best possible projects and services to our customers using the best talent the Corps has to offer, regardless of where that talent resides. We can do this…….. together.

When your travels take you to San Francisco, please stop by the division office for a visit. I will be leaving Washington on 17 July and reporting to South Pacific Division on 3 August. Until Carl Enson arrives in Washington on 31 August, Philip M. Brown will be Acting Chief, Engineering and Construction Division. Harry Kitch and John Burns will share the Acting Chief Planning responsibilities until Carl arrives on 31 August or until a permanent selection for the Chief of Planning is announced. [Stockton, (202) 761-0215 or (202) 761-0115 while in Planning]

CURRENT NEWS FROM CWE

SES Assignments

During June, the Chief of Engineers announced the selection of the following individuals to the ranks of the Senior Executive Service.

Mr. Don Basham currently the Deputy DE for PM in the Louisville District has been selected for the position of Director, Engineering & Technical Services, Mississippi Valley Division

Mr. Louis Carr currently the Chief, Construction Division, Southwestern Division, has been selected for the position of Director, Engineering & Technical Services, Pacific Ocean Division

Mr. Jim Crews currently the Chief, Construction Operations, Great Lakes & Ohio River Division, has been selected for the position of Director, Engineering & Technical Services, Northwestern Division

Mr. Ed Shuford currently the Deputy DE for PPM in the Wilmington District has been selected for the position of Director, Engineering & Technical Services, Southwestern Division

Mr. Rob Vining currently the Chief, Planning Division, South Pacific Division, has been selected for the position of Director, Programs Management, Great Lakes & Ohio River Division and

Mr. Mike White currently the Director of Programs Management, Great Lakes & Ohio River Division, has been selected for the position of Director, Programs Management, Northwestern Division.

Reporting dates are now being determined. [Pearre, (202) 761-4531]

Value Engineering Honors – Galveston District And Los Angeles District

Congratulations to the Galveston District, Southwestern Division, Houston-Galveston Channels Project Value Engineering Team, which is scheduled to receive Vice President Gore's Hammer Award on 16 July. The team is being rewarded for their effort, which accomplishes more than $38,400,000 in first cost savings and avoidance. Their accepted proposals will accelerate the project schedule, result in $13,300,000 in life cycle savings, and are expected to net more than $128,000,000 in increased navigation benefits.

United States Senator Jon Kyl, Arizona, opened his keynote address to the 1998 SAVE International Conference here in Washington, D.C., with praise for the U.S. Army Corps of Engineers Value Engineering Program. He noted our $3,000,000,000 in credible program savings and cost-avoidance, and featured how over $4,000,000 in Value Engineering savings and cost avoidance helped get the Los Angeles District, South Pacific Division's, Arizona Canal and Diversion Channel constructed in Phoenix. Senator Kyl stated that he had sent a letter to the U.S. Department of Energy asking why they are not properly utilizing a VE program. He also noted that he had recently sent a letter to the U.S. Army Corps of Engineers requesting more information on our success, for use in promoting VE at other agencies and departments. Senator Kyl's presentation was made to over 300 VE professionals from 31 countries on 15 June. [Holt, (202) 761-8738]

Centers of Expertise Website

The new Corps-Wide Centers of Expertise regulation, ER 1110-1-8158, was recently issued. This regulation implements a streamlined two-tiered CX Program, mandatory and voluntary. It maintains the current designation “Mandatory Centers of Expertise” (MCX), and replaces the current categories “Technical Centers of Expertise” (TCX), “Support Centers” (SC), and “Centers of Standardization” (COS) with a simplified voluntary “Directory of Expertise.” The regulation requires evaluation of existing MCX through an intensive re-certification process to ensure they are established and maintained only in the corporate best interests, and makes the Internet primary source of CX information. A letter will be issued shortly to set a time schedule for initial certification of MCX and DX entries. You may visit the CX website at: http://www.usace.army.mil/inet/functions/cw/cecwe/coexpert/newcoe/coemain.htm or from the Corps homepage, choose “Organization,” then “Centers of Expertise.” This site provides “one-

stop shopping" for specialized technical expertise in the Corps. [Bank, (202) 761-1660]

Major Subordinate Commands Quality Assurance Responsibilities

The Chief of Engineers issued a policy letter on the Major Subordinate Command's Quality Assurance Responsibilities. The letter provided the minimum, "above the line," focus areas of responsibility that he considers essential to improve the execution of the MSC QA mission. All of these focus areas of responsibility should be on the MSC "must do" list. A copy of the policy letter is attached as Appendix A. [Baldi, (202) 761-8894]

Termination of ACI Concrete Certification Program

Effective August 1998, the American Concrete Institute (ACI) will cease offering its Concrete Construction Inspector certification program. This will impact our PROSPECT course "Quality Verification: Concrete II-QV (#332)" since this course provides the participant with the specific knowledge required to become certified by the ACI as a Concrete Construction Inspector--Level II. If you have registered for or were planning to register for this course scheduled for Vicksburg, MS, 12-16 April 1999, you should know that no ACI certification can be offered at this time. We are currently exploring alternatives for the FY99 and later sessions. [Lee, (202) 761-0412]

CWE INFORMATION

1998 Chief of Engineers Design and Environmental Awards Program

The 1998 Chief of Engineers Design and Environmental Awards Program was judged on 3-4 March 1998 at HQUSACE. Seventy projects were submitted this year, and twenty-two projects selected for awards, twelve in Military Programs, and ten in Civil Works. Projects in the two categories were judged independently by interdisciplinary juries of six design professionals each. The **Chief of Engineers Award of Excellence** was given to two projects this year, one in Military Programs (MP) and One in Civil Works (CW). The Military Programs winner was the Consolidated Education and Training Facility, U.S. Air Force Academy, Colorado, designed by HDR Architecture Inc., and executed by the **USAED, Omaha.** The Chief of Engineers Award of Excellence, Civil Works, was given to St. Paul Flood Control Project, Mississippi River, St. Paul, Minnesota, designed by Short Elliott Hendrickson, Inc., and executed by the **USAED, St. Paul.**

Honor Awards were given to the following projects:

- Operations Center, Defense Supply Center Columbus, Columbus, Ohio, **USAED, Louisville,** MP.
- Waste Water treatment Facility, Edwards Air Force Base, California, **USAED,**

Los Angeles, MP.

- Central Indianapolis Waterfront, Indianapolis, Indiana, **USAED, Louisville,** CW.
- Environmental Pool Management; Pike, Lincoln, and St. Louis Counties, Missouri, Calhoun, Jersey, and Madison Counties, Illinois, **USAED, St. Louis,** CW.
- Channel Maintenance Management Plan; Minnesota, Wisconsin, and Iowa, **USAED, St. Paul,** CW.
- Sonoma Baylands Wetland Demonstration Project, Sonoma County, California, **USAED, San Francisco,** CW.
- Sargent Beach, Texas 8-Mile Reach, Sargent Beach, Texas, **USAED, Galveston,** CW.

Merit Awards are given to the following projects:

- Association of Graduates Building, U.S. Military Academy, West Point, New York, **USAED, New York**, MP.
- ADAL Integration Support Facility, Peterson Air Force Base, Colorado, **USAED, Omaha**, MP.
- Child Development Center, U.S. Air Force Academy, Colorado, **USAED, Omaha,** MP.
- T-38 Test Cell Remediation Project, Holloman Air Force Base, New Mexico, **USAED, Omaha,** MP.
- Bioremediation of Explosive-Contaminated Soil, Umatilla Chemical Depot, Hermiston, Oregon, **USAED, Seattle,** MP.
- Phase II Remedial Action, Tanapag Village, Saipan, **USAED, Honolulu,** MP.
- Repair Chillers, Building 137, Tripler Army Medical Center, Oahu, Hawaii, **USAED, Pacific Ocean,** MP.
- U.S. Army Reserve Command Headquarters, Fort McPherson, Georgia, **USAED, Savannah,** MP.
- Retention Basin at Old Camp Area, Marine Corps Air Station, Twenty-Nine Palms, California, **USAED, Los Angeles,** MP.
- Simon Estes Riverfront Amphitheater, Des Moines Recreational River and Greenbelt, Des Moines, Polk County, Iowa, **USAED, Rock Island,** CW.
- Gene A. Potter Memorial Bridge, Hobucken, North Carolina, **USAED, Wilmington,** CW.
- Vertical Lift Gates at Highway 28 & Grand Avenue, West Des Moines, Des Moines and West Des Moines, Iowa, **USAED, Rock Island,** CW.
- Mississippi River Levee Program, Issaquena County, Mississippi, **USAED,**

Vicksburg, CW.

The awards plaques and program brochure are currently in production. Plaques should be distributed to the points of contact listed on the confidential data forms in July. The 1998 awards brochure is ready to print and should be available later this summer. It will be available on the Internet at http://www.hq.usace.army.mil/cemp/e/ea/awd/awndx.htm , in hard copy form and on CDROM. [Bickley, (202) 761-8892]

DID YOU KNOW

Metric News

Guide Specification CEGS-01415, Metric Measurements. When awarding projects be sure to include the guide specification CEGS-01415, metric measurements, in the contract document. Inclusion of this specification section is critical for all metric projects since it establishes the basis for Contractor compliance with the specific metric requirements and provides information necessary to better understand the metric requirements and terminology.

Revision to Guide Specifications. For your information - The Corps of Engineers Guide Specifications (CEGS) pertaining to the masonry, non-bearing masonry walls, and acoustical ceiling systems are modified to comply with the new metric law, *Savings in Construction Act of 1996 (P.L. 104-289),* and are now available on the HQUSACE-sponsored TECHINFO site on the Internet. These changes provide guidance on how to provide options for using either metric (referred to as hard metric) concrete masonry units (CMU) and recessed light fixtures (RLF) or their inch-pound substitutes (referred to as soft metric) in metric projects, without compromising the quality of design. The revised specifications offer the general contractor the choice of using either hard or soft metric CMU blocks/ RLF based on his total installed price. We are not obligated to modify our design, such as altering the length of the wall and dimensions/spacing of other elements in the wall -like doors, windows, rebars, etc.- to accommodate the use of soft metric CMU blocks. [Baldi, (202) 761-8894]

Specifications

TECHINFO is the official HQUSACE-sponsored site where CEGS, CEAGS, and CWGS are maintained and issued, along with approved Architectural and Engineering Instructions (AEI), Engineering Instructions (EI), Engineering Improvement Recommendation System (EIRS) Bulletins, and related support documents. **TECHINFO** also links to the USACE Publications Library for access to engineering, design, and construction DA and USACE publications. **This site is located at** http://www.hnd.usace.army.mil/techinfo/index.htm **.**

The Construction Criteria Base (CCB), maintained in CD-ROM and on-line formats by the National Institute of Building Sciences (NIBS), also contains all USACE engineering, design, and construction criteria, as well as related criteria issued by other military, Federal, and private sector organizations. In the near future, NIBS will link to TECHINFO to access our consolidated criteria database for distribution on CCB. This will ensure that we have the same guidance published on all of our distribution sources. **The Internet version of CCB is located at** http://www.nibs.org/ccb **.**

The SPECSINTACT (SI) Home Page, maintained by the Kennedy Space Center (KSC), accepts user feedback and provides access to the latest software releases, software release notes, the on-line *User Guide*, lessons learned, and other current news. **The SI site is located at** http://si.ksc.nasa.gov/specsintact **.**

The Library of CADD Designs is maintained by the Tri-Service CADD/GIS Technology Center at CEWES and contains CADD drawings for USACE projects, CADD details, and standard symbols available for viewing and downloading. **This site is located at** http://cadlib.wes.army.mil/cadlib.htm **.** [Baldi, (202) 761-8894]

Self-Lubricated Bearing Workshop at Naval Research Laboratory

Messrs. John Jones (CENWP-HD) and Andy Wu (CECW-ET) attended the 3-day workshop in June. The purpose of this workshop was to provide an update on the status of testing and use of self-lubricated bearings on the Navy's surface ships and submarines and the Corps hydroelectric turbines. Test data from the Corps R&D work unit on self-lubricated bearings for hydropower applications has been found to be valuable and useful to the naval applications by the Navy engineers. Cooperation between the Corps and the Navy will continue. The Corps research and development work on self-lubricated bearings evaluated the actual performance of off-the-shelf self-lubricating bushings for hydropower applications. It developed and performed standard tests on coefficients of friction, wear rate, and swell in water and oil. It performed extended wear tests on six materials that fared best in standard tests. Although the test criteria, procedures, and equipment were established based on the requirements from hydropower applications, there is potential for other applications, such as bushings for the miter gates or tainter gates. A rating system has been developed to help designers on self-lubricated bearing selections. The rating system applies weighting factors to the lab test results and comes up with a numerical rating for each commercially available bearing for each intended use. For a copy of test results and the rating system in an electronic format (Microsoft Word 97); please send your E-mail to Mr. John Jones at john.a.jones@usace.army.mil , or call (503) 808-4236. A hard copy can be mailed to those without Microsoft Word 97. [Wu, (202) 761-8614]

YOU ASKED

No questions were received for this issue of the notes.

Questions are needed by the 15th of the month for the next issue of HQ CIVIL WORKS ENGINEERING NOTES. Questions can be sent by FAX to (202) 761-4002 or by e-mail to Charles Pearre. [Pearre, (202) 761-4531]

DAM SAFETY PROGRAM

National Inventory of Dams Update Underway

The 1998 update of the National Inventory of Dams (NID) has been initiated. Congress specifically authorized the Corps to accomplish periodic updates of the NID, the comprehensive source of information about the nation's dams. The previous update, which contained 75,187 dams, was completed in 1996 by FEMA under Memorandum of Agreement with the Corps. The Corps is executing the 1998 update, partnering with our Topographic Engineering Center (CETEC). The new update will feature a graphical Geographic Information System (GIS) interface, and will be web enabled in the near future. The call for updated data has been sent to all Divisions, and the input to CETEC is due by 30 Jul 1998. [Bank, (202) 761-1660]

1998 ASDSO Annual Conference

The 1998 ASDSO Annual Conference is scheduled for 11-14 October 1998 at the Riviera Hotel in Las Vegas, Nevada. The conference will include a number of technical case studies in dam rehabilitation and an update on the National Dam Safety Program including the National Inventory of Dams. All Corps of Engineers personnel working with the Dam Safety Program are encouraged to attend. Additional information will be furnished to all Dam Safety Coordinators upon receipt from ASDSO. [Pearre, (202) 761-4531]

FIELD INFO TO SHARE

SHOALS Savings

The following information was received from the Mobile District concerning cost-avoidance achieved by using SHOALS.

> "We have finished the drawings and specifications for the rehabilitation of the remainder of the jetties at Panama City. I'm sorry it took as much effort on our

> part as it did, but it was almost like starting from scratch with new surveys and having to adjust the alignment. I believe the effort was worth it though, if we can get it built before it changes much more. As it turned out, the 1995 surveys did not very accurately reflect the conditions on the channel side of the west jetty, and there would have a lot of field changes required if we had tried to build it based on the old survey. By using the new survey **(SHOALS)** and making several trial and error inroads runs, we were able to reduce the mount of stone that would have been required by 26,600 tons for a savings of $1,200,000 dollars. The final drawings are being reviewed now. I can send you a copy if you like. The attached WORD file documents the changes we made to the original alignment, and contains a summary of the stone quantities."

[Lillycrop, (334) 694-3721]

Districts are encouraged to submit information for this section. Also, tell us your ideas on how HQ CWE can do it better and what you would like to know about. Your information is needed by the 15th of the month for the next issue. [Wallace, (202) 761-8890]

REMINDER

These HQ Civil Works Engineering and Construction Notes are now available on the Internet approximately three days after publication. You can the access the Notes directly at http://www.usace.army.mil/inet/functions/cw/cecwe/notes/ .

APPENDIX A

QUALITY ASSURANCE POLICY LETTER

CECW-EP (1110) 9 June 1998

MEMORANDUM FOR SEE DISTRIBUTION

SUBJECT: Major Subordinate Commands Quality Assurance Responsibilities

1. This memorandum reaffirms the Major Subordinate Commands (MSC) Quality Assurance (QA) focus areas presented to the Board of Directors on 5 February 1998. The MSC responsibilities subsequently provided are the minimum, "above the line," focus areas of responsibility that I consider essential to improve the execution of the MSC QA mission. All of these focus areas of responsibility should be on the MSC "must do" list.

2. Background. The MSCs have made great strides at transitioning to a QA organization. However, during this transition each MSC defined their duties a little differently and during the Command Inspections it became apparent that USACE needed to corporately agree on what minimum, "above the line," performance tasks each MSC must do for QA proficiency. Therefore, I asked SAD to coordinate with all the MSCs and develop a minimum number of MSC focus areas of responsibility. This effort resulted in nine focus areas that were presented to the Board of Directors, subsequently receiving their buy in. These nine "above the line" focus areas are the minimum MSC standard responsibilities. Each MSC is responsible for this minimum, and is strongly encouraged to do more. To accomplish these focus areas, each MSC must develop a team approach to quality management within the MSC and also between the districts and the MSC.

3. The nine MSC QA focus areas are:

Focus Area #1: MSC Quality Management Plan – Action: Develop and Maintain. Each MSC must develop a Quality Management Plan (QMP), outlining the policies and procedures that all functional areas within the MSC will follow for their QA activities and the quality management responsibilities of the districts.

Focus Area #2: District Quality Management Plan – Action: Review and Approve. The MSC must review and approve the district prepared QMP, which outlines the policies, procedures and responsibilities of all functional areas for producing quality products and services. The QMP covers the district's actions on both in-house products as well as A/E or other contracted work.

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Focus Area #3: Quality Control Plans – Action: Approve/Monitor. The MSC must establish a procedure to review and approve district Quality Control Plans (QCP) for decision and implementation documents. Ensure compliance with approved QCPs by periodically verifying the independence of technical review (ITR), resolution of comments, documentation, etc. The MSC must oversee the district QA role when the district conducts QA activities for A/E designs and other contracted products. This also includes oversight of district QA plan for monitoring construction contractors Quality Control Plan.

Focus Area #4: District Quality Processes – Action: Audit and Report. Review district products for QC Process Evaluation. This includes meeting periodically with districts to review their quality control processes through evaluation of selected products and services at various stages of development to assure compliance with the QMP. Feedback to the district on these quality assessment audits is essential for district process improvement as feedback to HQUSACE for lessons learned distribution throughout USACE.

Focus Area #5: Performance Indicators – Action: Review and Evaluate. Proactively track existing performance indicators and develop and maintain regional indicators as required. Identify areas needing command attention to assure a viable organization that is responsive to USACE customers through quality products.

Focus Area #6: Product Development – Action: Continuous Involvement. Participate in selected project meetings as required by policy guidance and as needed for high visibility and/or complex projects. MSCs are to assist in resolution of policy and/or technical issues and interface with HQUSACE as appropriate, approve deviations from criteria and conduct selected project site visits.

Focus Area #7: Partner with District – Action: Coordinate and Mentor. Provide for continuous dialog and interactions with counterparts to keep them informed of upcoming work, training, new regulations, etc. Also, develop and implement regional guidance, share lessons learned and facilitate changes in criteria, facilitate partnering and sharing of resources across districts and evaluate district technical capabilities and needs.

Focus Area #8: Programming Activities – Action: Approve / Certify. Continue coordination of all programming activities with HQUSACE and districts.

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Focus Area #9: Command and Staff Inspections – Action: Conduct and Provide Feedback. Examine mission execution, level of training, FTE resources, workload, compliance with standards and regulations and obtain feedback on morale, welfare, discipline and problems / needs.

4. Adherence to these focus areas by each MSC Commander will continuously improve the organizational quality efficiency making our customers aggressively request our assistance in engineering and construction work.

5. Guidance will be revised to reflect these minimum QA focus areas of MSC responsibility.

/signed/
JOE N. BALLARD
Lieutenant General, USA
Commanding

DISTRIBUTION:
Commander, Great Lakes and Ohio River Division
Commander, Mississippi Valley Division
Commander, North Atlantic Division
Commander, Northwestern Division
Commander, Pacific Ocean Division
Commander, South Atlantic Division
Commander, South Pacific Division
Commander, Southwestern Division